

Work Order ID 54760

December 21, 2009 9:05:36 AM

Page 1

Item ID: D3183-044

Accept

Revision ID:

Item Name: Bracket Assembly

Start Date: 12/21/09 Start Qty: 8.00

Required Date: 1/04/10 Req'd Qty: 8.00

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3183

Rev C1

100

0.00



BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut blanks: (1.500" x 2.250") 5.500" long

Y.A 10/01/04

8

0

110

0.00



HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine D3183-4 as per Folio FA322 and Dwg D31831 Identify as D3183-4
412-Deburr 13-Scribe batch number

Y.A 10/01/07

8

1

120

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

Y.A 10/01/07
10.01.09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3183-044 PAR #: N/A Fault Category: Machining NCR: Yes No DQA: 11 Date: 10.01.12
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: 11 Date: 10/01/26

NCR: <u>54760</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10/01/07	110	I part scrap → jumped out of jig during machining due to uneven material (not square and not plane. At the bottom side.	<u>WSM</u>	Material is being faced as necessary to ensure squareness. Scrap & replace M# <u>11/899</u>	<u>H.A</u> <u>10/01/07</u>	<u>8</u> <u>10/01/11</u>	<u>WSM</u>	<u>10-01-07</u>
		R.C: Material's minor surface curve						

NOTE: Date & initial all entries

Work Order ID 54760

December 21, 2009 9:05:36 AM



Page 2

Item ID: D3183-044

Accept



Setup Start



Revision ID:

Stop



Item Name: Bracket Assembly

Start Date: 12/21/09 Start Qty: 8.00



Cust Item ID:

Required Date: 1/04/10 Req'd Qty: 8.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

SB 10/01/10

8

140

Small Fab

0.00



Small Fab

Memo

0.00

Small Fab

Assemble D3183-043 as per Dwg D3183.

SB 10/01/11 (8)

150

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

→ S 10/01/11

(S)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 54760

December 21, 2009 9:05:37 AM

Page 3

Item ID: D3183-044

Accept

Setup Start

Revision ID:

Stop

Item Name: Bracket Assembly

Start Date: 12/21/09 Start Qty: 8.00

Cust Item ID:

Required Date: 1/04/10 Req'd Qty: 8.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

Identify as per dwg & Stock Location: 23p

0.00



Packaging

Memo

0.00

Packaging

10-1-11 (8) 9

170

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/01/12 JF
AS 10-1-11
(8)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December 21, 2009 9:05:35 AM

Page 1

Work Order ID: 54760

Parent Item: D3183-044

Parent Item Name: Bracket Assembly

Comments:

Start Date: 12/21/09

Required Date: 1/04/10

Start Qty: 8.00

Required Qty: 8.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

D3183-045 Manufactured No



Bearing Assembly

100 Each 120.0000 16.0000

Ep 10/01/11

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST 120

46393 3

51560 2

52209 115

D3121-21 Manufactured No



Bolt

140 Each 43.0000 16.0000

Ep 10/01/11

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST 43

46032 5

50096 10

52518 28

M174B1.500X02.250 Purchased No



17-4 SS Bar 1.50 X2.250

140 f 9.8606 3.8594

B54797 (16x)

Warehouse Loc Qty Loc Code
Location

Main Warehouse

MAT 9.8606

108309 0.82

111899 9.0406

3.6666 + 19.A10/01/04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 547100
Description: Bracket		Part Number: D3183-4
Inspection Dwg: D3183	Rev: C1	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

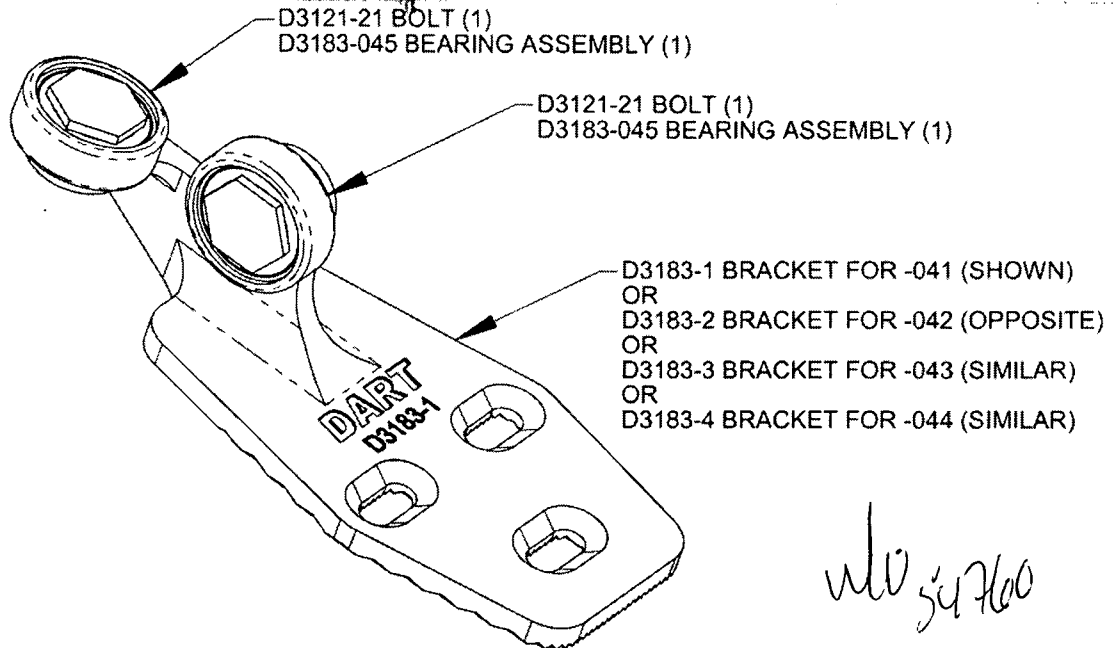
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
R0.190	+/-0.030	R 0.188	✓			
R0.063	+/-0.010	R0.063	✓			
0.188 0.182	+/-0.010	0.182	✓			
0.070	+/-0.010	0.070	✓			
0.100	+/-0.010	0.099	✓			
Ø0.201 x 0.100	+/-0.010	Ø0.200 x 0.100	✓			
0.188 0.182	+/-0.010	0.182	✓			
5.32	+/-0.030	5.317	✓			
5.036	+/-0.010	5.036	✓			
2.120	+/-0.010	2.120	✓			
1.290	+/-0.010	1.290	✓			
0.365	+/-0.010	0.365	✓			
0.218	+/-0.010	0.218	✓			
1.030	+/-0.010	1.031	✓			
1.90	+/-0.030	1.888	✓			
1.012	+/-0.010	1.012	✓			
Ø0.201 x 0.100	+/-0.010	Ø0.200 x 0.100	✓			
0.786	+/-0.010	0.786				
Ø0.392	+0.002/-0.000	Ø0.3935				
R0.19	+/-0.030	R0.188	✓			
3.954	+/-0.010	3.954	✓			
0.162	+/-0.010	0.160	✓			
R0.19	+/-0.030	R0.190	✓			
R0.25	+/-0.030	R0.250	✓			
4.26	+/-0.030	4.261	✓			
2.800						
Calculated dimension	+/-0.030	2.800				
0.162	+/-0.010	0.161	✓			
0.615	+/-0.010	0.614	✓			
0.435	+/-0.010	0.433	✓			
0.200	+/-0.010	0.199	✓			
0.381	+/-0.010	0.382	✓			
0.032	+/-0.010	0.031	✓			

Measured by: YA	Audited by: SB	Prototype Approval:	N/A
Date: 10/01/07	Date: 10/01/10	Date:	N/A

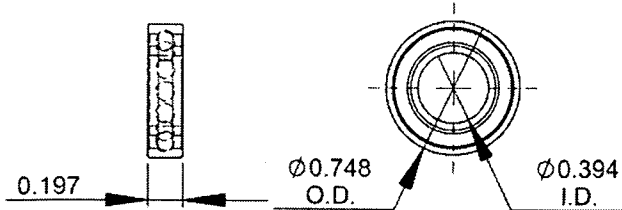
Rev	Date	Change	Revised by	Approved
A	03.11.12	New Issue P/O D3183-044	KJ/RF	
B	04.03.15	Changes as per revision C	KJ/JLM/RF	
C	04.06.15	Dimension 2.800 was 2.080; removed 1.155, 0.36 dimensions	KJ/JLM	
D	06.03.09	Dwg Rev update	KJ/JLM	
E	08.01.16	Dimensions revised	KJ/EC/DD	

DART

DESIGN #	DRAWN BY #	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3183	REV. C SHEET 1 OF 4
DATE 04.02.17	TITLE BRACKET ASSEMBLY		SCALE 1:1
A	03.01.24	NEW ISSUE	
B	03.06.17	REMOVE BEARING; 1.012 WS 0.882	
C	04.02.17	ADD -045/-9; 0.182 WAS 0.431	
C1	04.11.09	0.830 WAS 0.850	

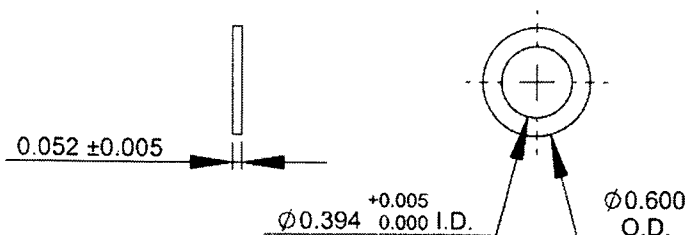
RELEASED
04 03 01

D3183-041 BRACKET ASSEMBLY (SHOWN)
D3183-042 BRACKET ASSEMBLY (OPPOSITE)
D3183-043 BRACKET ASSEMBLY (SIMILAR)
D3183-044 BRACKET ASSEMBLY (SIMILAR)



D3183-5 BEARING:
SPECIFICATION CONTROL DRAWING

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
- 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES



D3183-7 WASHER

- 1) MATERIAL: AISI 303 ROUND BAR (M303R) ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

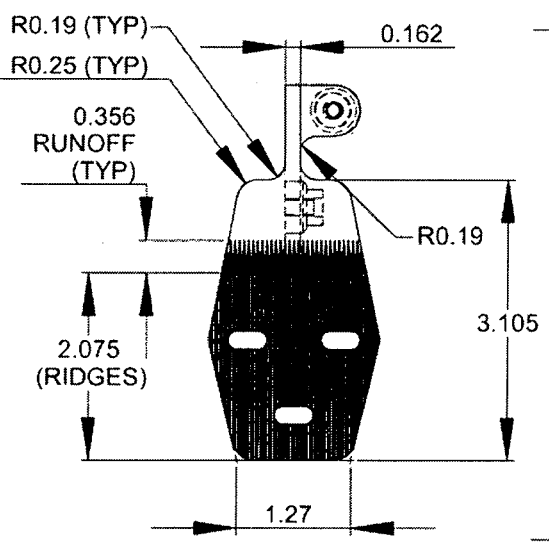
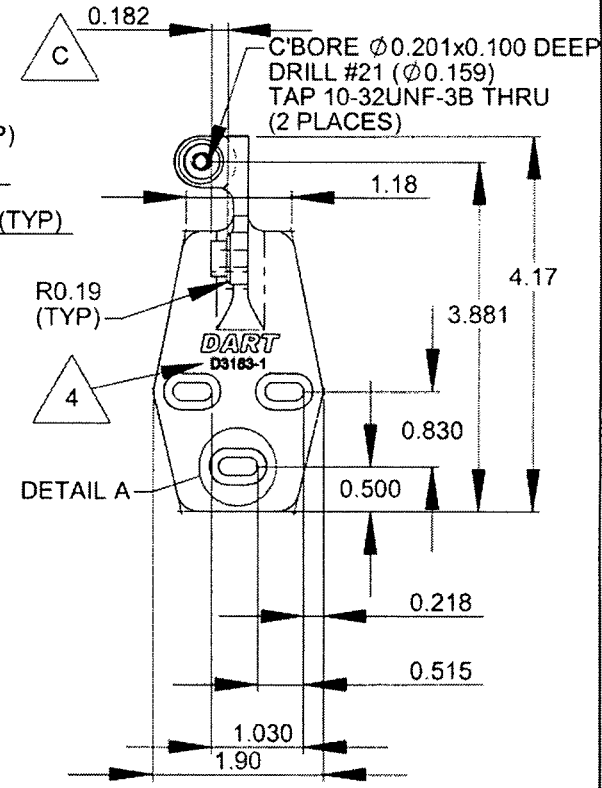
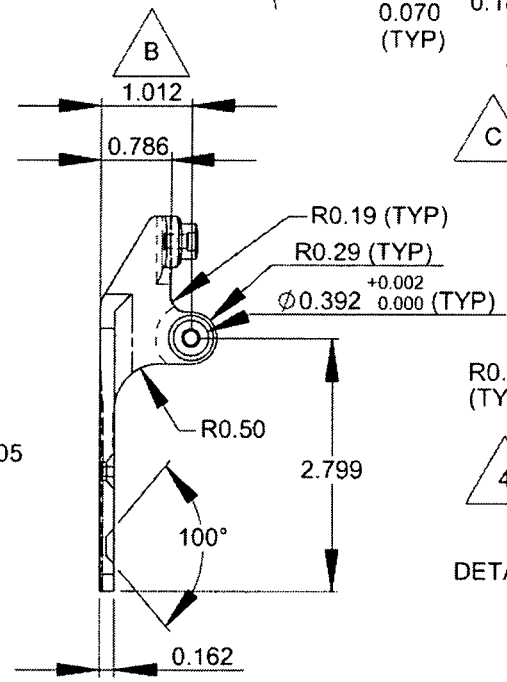
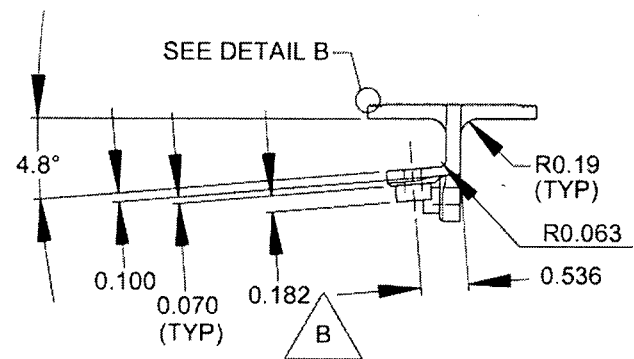
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DART

RECEIVED
04.02.17

DESIGN	DRAWN BY	DART AEROSPACE LTD
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	TITLE	REV. C
04.02.17	D3183	SHEET 2 OF 4
	BRACKET ASSEMBLY	SCALE 1:2



**D3183-1 BRACKET SHOWN
D3183-2 BRACKET OPPOSITE**

- 1) D3183-1 CAN BE MADE FROM D3183-3
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

WJ
54460

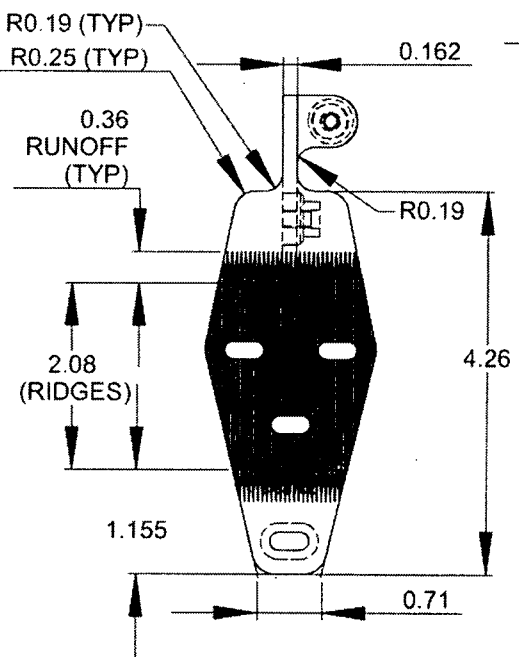
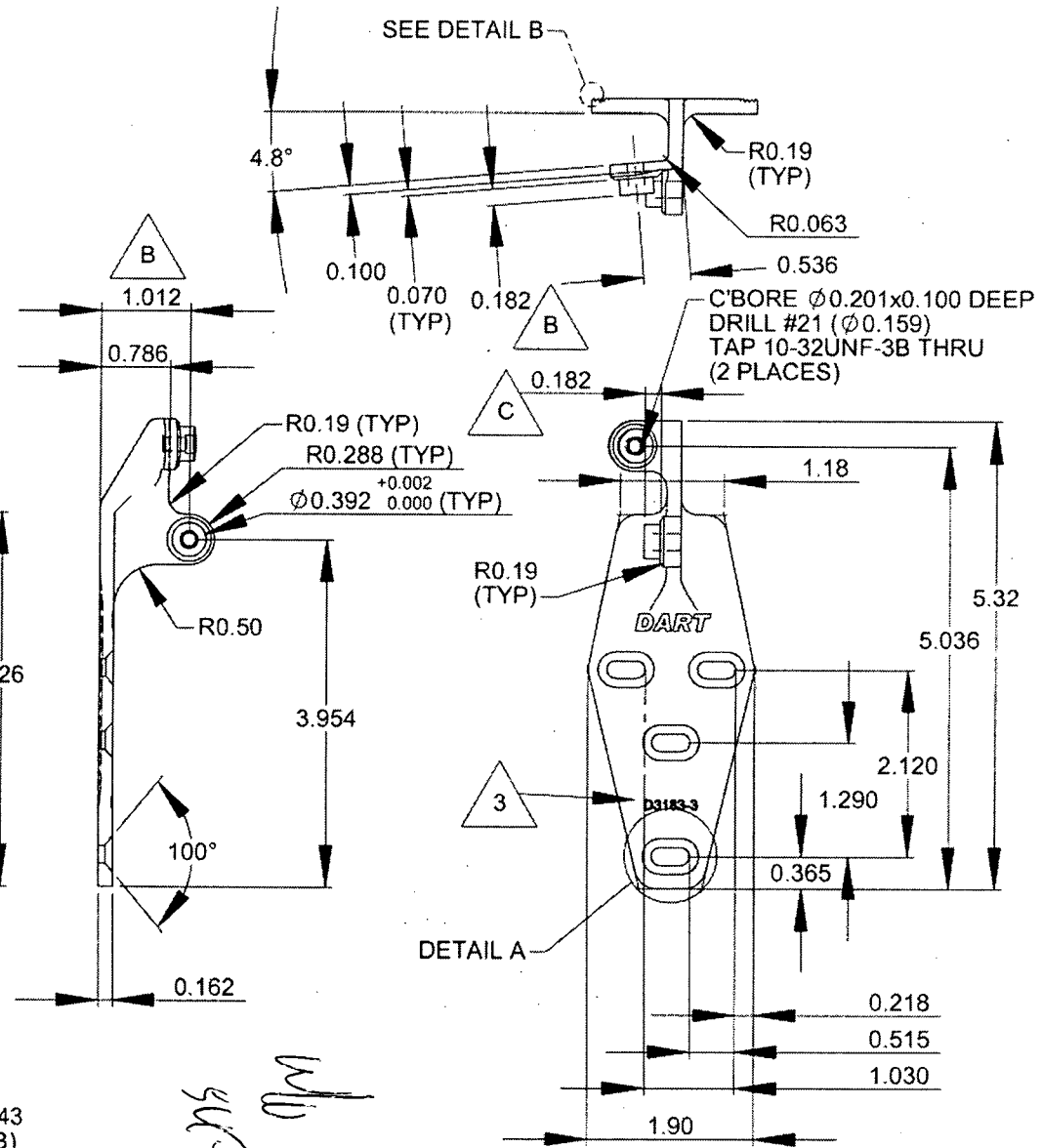
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DART



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CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	TITLE	REV. C
04.02.17	D3183	SHEET 3 OF 4
	BRACKET ASSEMBLY	SCALE 1:2



D3183-3 BRACKET SHOWN
(REPLACES BELL P/N 412-030-304-105)
D3183-4 BRACKET OPPOSITE
(REPLACES BELL P/N 412-030-304-106)

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) ENGRAVE DART P/N & LOGO AS SHOWN
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

WLB
5/2/00

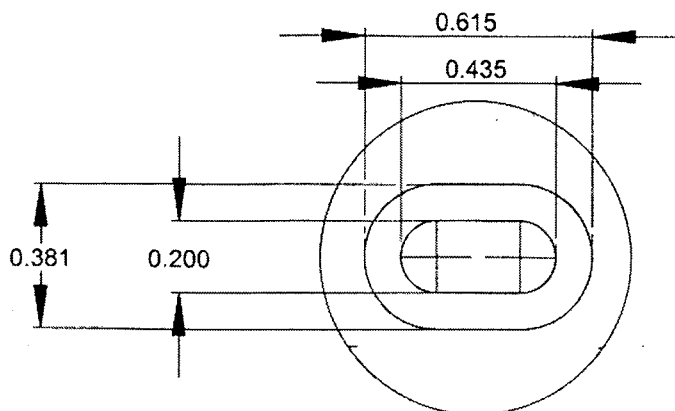
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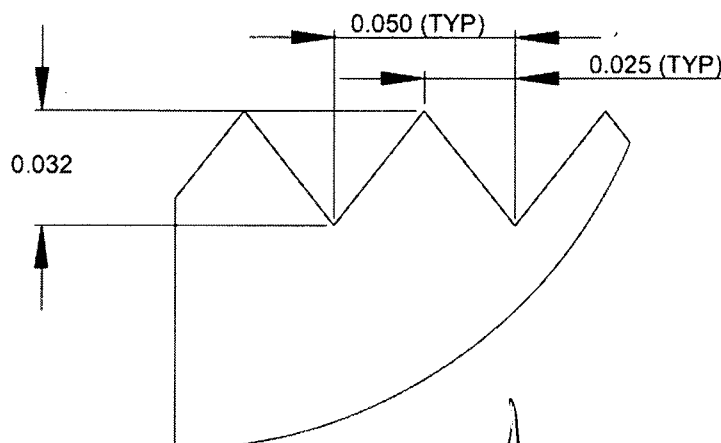


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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3183	REV. C SHEET 4 OF 4
DATE 04.02.17	TITLE BRACKET ASSEMBLY		SCALE 1:1



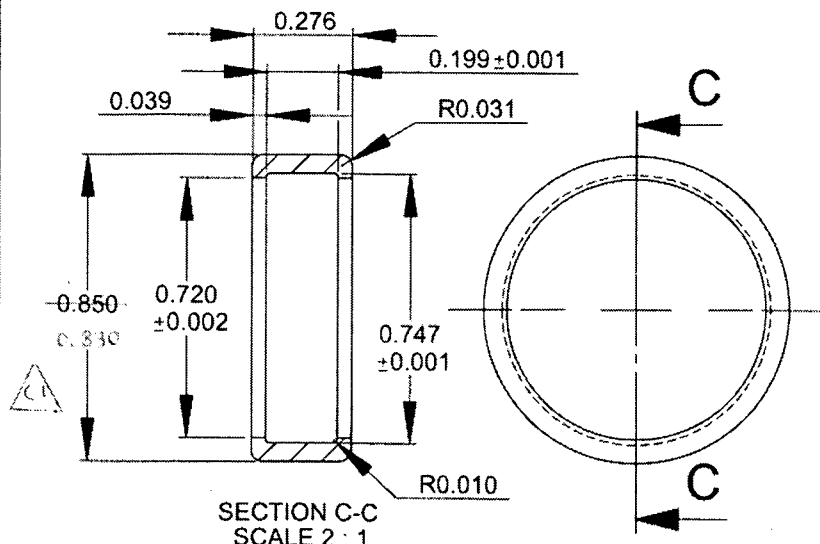
DETAIL A (2 : 1)

RELEASED
04 03 01



DETAIL B (20 : 1)

W0 54760



SECTION C-C
SCALE 2 : 1

D3183-9 CAP

- 1) MATERIAL: DELRIN ROD, Ø1.00
(REF DART SPEC. M-DELRIN-R1.00)
- 2) TOLERANCES ARE PER DART QSI 018
UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

D3183-045 BEARING ASSEMBLY

- 1) ASSEMBLE D3183-5 BEARING AND
D3183-9 CAP

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